

4171

U. S. SURVEY

Diag. Ch. No. 2-66

1918 SO 100

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: *Ala., Miss., La.*

11-5813

DESCRIPTIVE REPORT.

Hyd. Sheet No. *4171*

LOCALITY:

Gulf of Mexico
Mobile Bay Entrance
to Chandeleur Islands
offshore

1920

CHIEF OF PARTY:

J. H. Peters

4171

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET #2. (Field No.)

LIMITS:

Hydrographic Sheet #2 comprises offshore hydrography in the Gulf of Mexico, from Mobile Bay entrance westward to Chandeleur Island.

GENERAL DESCRIPTION OF COAST LINE:

The coast line along this portion of the Gulf is low and sandy, with no outstanding features of navigational importance.

SCALE: METHODS:

The scale of the sheet is 1 : 80,000. Soundings are in feet and were reduced for tide and pencilled in on the sheet. Soundings of 42 feet and under were made by handlead. Beyond that depth the trolley system was used.

The nature of the coastline necessitated the construction of tall hydrographic signals averaging 100 feet in height. Beyond the limit of visibility of the shore signals five Buoys with tall superstructures, placed by the Lighthouse Service, furnished the necessary control; while beyond their visibility dead reckoning (corrected for current by hourly current observations) fixed the position of the sounding lines.

TIDES AND CURRENTS:

Soundings were reduced from tidal observations made at different portions of the work. An Automatic Tide Gauge at Ft. Morgan, Alabama, and another at Biloxi, Mississippi, were used in the reduction of all soundings except those off Chandeleur Island. Soundings in the latter vicinity were reduced from a Tide Staff maintained at Chandeleur Id. It, which had been connected in with Ft. Morgan and Biloxi gauges by simultaneous observations. The Biloxi gauge was one maintained by the Mississippi River Commission.

No conclusions can be drawn from the current observations made during the progress of the hydrography. The currents seemingly could not be formulated into any single rule, consisting as it does of eddies and cross-currents with no well defined course or direction over any considerable area.

SHEET #4134 (OFFICE REGISTER)

Sheet #5, Office Register #4134 was used in conjunction with this sheet (#2) in order to plot one "dead-reckoning line" which extended beyond the limits of Sheet #2.

STATISTICS - SHEET # 5.

<u>Date</u>	<u>Letter</u>	<u>Vol.</u>	<u>Positions</u>	<u>Soundings</u>	<u>Miles, stat.</u>	<u>Vessel</u>
July 7, 1920.	C	1	6	15	8.0	Ranger
" 8, 1920.	D	1	42	115	57.7	"
		TOTALS	48	130	63.3	

Notes: 1) Remaining statistics for sheet #5 for July 7, 8, 9th.
are contained in sheet #2 volumes and statistics.

2) Unit for soundings; reduced to feet and tenths.

3) Tide gauge location.

Automatic tide gauge, Fort Morgan, Ala., C. & G. S.

Plane of reference - 3.4

Lowest observation : 3.0

Highest " : 5.7

STATISTICS - SHEET #2.

<u>Date</u>	<u>Letter</u>	<u>Vol.</u>	<u>Positions</u>	<u>Soundings</u>	<u>Miles, stat.</u>	<u>Vessel</u>
June 10, 1920.	A	1	10	55	6.0	Ranger
15	B		6	35	3.0	"
17	C		128	640	99.4	"
18	D		56	261	33.0	"
23	E		74	435	47.0	"
24	F		67	241	46.3	"
"	"	2	58	251	40.3	"
25	G		78	386	54.0	"
July 7, 1920.	H		110	540	89.0	"
8	I		4	25	3.5	"
9	J		85	553	48.8	"
13	K	3	77	391	51.0	"
14	L		101	527	69.6	"
15	M		121	556	116.4	"
16	N		88	390	53.0	"
20	O	4	65	258	71.9	"
21	P		87	414	63.7	"
22	Q		63	357	39.1	"
23	R		83	433	75.6	"
27	S	5	12	69	16.3	"
August 2, 1920.	T		37	319	54.9	"
3	U		10	48	11.6	"
13	V		47	260	33.4	"
18	W		35	443	57.7	"
25	X		41	374	67.0	"
"	"	6	3	36	3.6	"
26	Y		51	459	77.7	"
27	Z		31	292	45.9	"
30	A'		116	642	75.7	"
31	B'		73	384	46.5	"
"	"	7	44	223	34.5	"
September 1, 1920.	C'		54	306	36.8	"
2	D'		129	1015	79.4	"
3	E'		71	306	47.7	"
"	"	8	13	83	10.3	"
8	F'		113	639	77.0	"
9	G'		132	757	88.5	"
10	H'		92	515	70.0	"
"	"		73	408	32.0	"

			8	13	83	10.3	"
				113	639	77.6	"
				132	757	88.5	"
	10	H'		92	515	70.0	"
	"	"	9	32	177	22.0	"
	13	J'		105	537	71.0	"
	14	K'		93	477	63.0	"
	15	L'		63	409	43.1	"
November	3, 1930.	M'	10	90	538	57.5	"
	4	N'		82	463	57.5	"
	9	O'		7	61	4.0	"
TOTALS				3017	16750	2262.4	

*Paul W.
3-16-31*

NOTES:- 1) Unit for soundings; reduced to feet and tenths of feet.

2)	Tide gauge location.	Plane of reference	Lowest Observ.	Highest Observ.	Used on Sheet:
(a)	Auto. gauge, Ft. Morgan, Alabama. C. & G. Survey.	3.4	3.0	5.7	All work except off Chan. Island
(b)	Auto. gauge, Biloxi, Miss. Miss. River Commission.	5.2	3.8	8.6	Several day (a) did not register.
(c)	Tide staff, Chandeleur I. L. H., La. C. & G. Survey.	1.8	0.9	6.5	Work off Chan. Island

DIRECTOR
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC SHEET NO. 41/VFB

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON July 8, 1921.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 4171

Locality: Off coast of Mississippi, Gulf of Mexico

Chief of Party: J. H. Peters in 1920

Plane of reference is mean low water, reading

- * 3.4 ft. on tide staff at Ft. Morgan, Ala.
- * 5.2 " " " " " Biloxi, Miss.

Condition of records: Satisfactory.

- * Allowance made for difference in tide at place of soundings.



Chief, Division of Tides and Currents.

Section of Field Records

Report on Hyd - 4171

Surveyed - 1920

Chief of Party - J. H. Peters

Surveyed by - Str. Ranger

Projected by - Field Party

Sdg. Plotted by - Field Party

Verified & Indexed by - H. E. MacEwen

1. The records conform to the requirements of the general instructions.

2. The plan and character of the development fulfills the requirements of the general instructions.

3. With the following exceptions the sounding line crossings are adequate:

Line - 4PK' - 74 F (68-74 out 6 feet)

On M day crossings between 70M & 83M are generally bad - following are errors beginning at 70M at ~~crossing~~ consecutive crossings — $-2\frac{1}{2}$, -4 , $-3\frac{1}{2}$, $+6$, 0 , 0 , -7 , -8 , $+1$, 0 , $-7\frac{1}{2}$, -13 , $+1$, -5 , $+9$, $+5$, -2 .

Line - 89B' - 13H (65-55, out 10 feet)

Line 54K' - 10Z (81-76, out 5 feet)

One or two other instances of poor crossings show up for which there seems to be no remedy.

4. usual depth curves can be completely drawn

5. Field plotting was completed to extent prescribed in general instructions. At points where depths were constant for any distance or on one line the field draftsman did not plot all soundings nor were they located by time interval. Only enough soundings were plotted to indicate the depths.

6. junctions with adjacent sheets are satisfactory

7. No further surveying is required for this area.

over →

Remarks:

In general the dead reckoning work appearing on this sheet was not handled according to the methods prescribed by the office. In many instances the office draftsman found it necessary (using data appearing in sounding records and accepting control positions at the beginning and ending of lines as plotted by field party) to replot soundings penciled in the field.

There was an apparent disregard for log factors in locating positions between beginning and ends of lines and in many cases the soundings were not plotted by time.

9. Character and scope of surveying - Excellent
Field drafting - Excellent

Submitted August 11, 1921

H. E. MacEwan

AND REFER TO NO.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

SECTION OF FIELD RECORDS.

REPORT ON HYDROGRAPHIC SHEET No. 4171.

Surveyed in 1920.

Chief of Party: J. H. Peters.

Surveyed by party of Str. RANGER.

Protracted by R.R. Moore and R.W. Woodworth.

Soundings plotted by R.R. Moore and
R. W. Woodworth.

Verified and inked by H. E. MacEwen.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of development satisfies the specific instructions.
4. The sounding line crossings are, in general, adequate. There are some however, that exceed the usual limit of error and which result in an unnatural shape to the 60 foot curve. None of these discrepancies are of cartographic or navigational importance. As the errors are not systematic they are most likely due to errors in reading the lead line.
5. The development is sufficient to permit the usual depth curves to be drawn.
6. The field plotting was completed to the extent prescribed in General Instructions.
7. The field drafting was defective in some respects. When the depths remained constant the time intervals between soundings were often ignored, nor were all of the soundings plotted even when space permitted. The plotting of soundings on the dead reckoning lines was unsatisfactory, the time intervals and log readings being sometimes disregarded or followed carelessly.
8. The junctions with adjacent sheets are satisfactory.
9. No further surveying is required within the limits of the sheet.
10. The character and scope of the surveying are excellent. The field drafting is fair.
11. Reviewed by E. P. Ellis, August, 1921.
12. Two copies of this report to be sent to the Division of Hydrography and Topography.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

Sheet # 2.

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4171

State^s : Alabama, Mississippi, Louisiana.

General locality : Gulf of Mexico.

Locality : Offshore from Mobile Bay Entrance to Chandeleur Isl.

Chief of party : J.H. Peters.

Surveyed by : Str. RANGER.

Date of survey : June 10, 1920 -- November 9, 1920.

Scale : 1:80,000

Soundings in : feet.
Ft. Morgan, Ala. -- 3.4; used as noted on statistics

Plane of reference : Biloxi, Miss. ---- 5.2; " " " " sheet.
Chand. I. L. H., La. - 1.8; " " " " "

Protracted by R.R. Moore Soundings in pencil by R.R. Moore
R.W. Woodworth R.W. Woodworth

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, ☒ Tide books, ☐ Marigrams, ☒ Boat sheets,

☒ Sounding books, ☐ Wire-drag books, ☐ Photographs.

Data from other sources affecting sheet

Remarks:

AT MEAN LOW WATER

AT MEAN LOW WATER

Applies to chart 873 - A.V.R.

Applied to new chart 11366

10-30-91 John Pierce